

Work Order ID 86187

86187

Page 1

June-22-12 1:54:30 PM

Item ID: D3789-7

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Clamp

Stop *NS2*

Start Date: 22/06/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 06/07/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12/06/22* Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3789

Rev A

100

0.00

100

Bandsaw

Jeaspa Bandsaw

Memo

Cut extrusion to .820"

0.00

cut @ meter

CX 12/06/26

110

0.00

110

HAAS 1

HAAS CNC vertical machine #1

Memo

Machine as per Folio FA834

Dwg Rev:

Folio Rev:

Deburr

0.00

P10:17295

CX 12/06/26 20

issue P 10 to meter

machine as per dwg D3789 REV. A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86187

86187

June-22-12 1:54:30 PM

Item ID: D3789-7

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Clamp

Stop ***NS2***

Start Date: 22/06/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 06/07/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

~~N5~~ rec'd
115

QC
Quality Control

~~QC2-Inspect parts off machine FAI/FAIB~~

0.00

Memo

0.00

rec'd + inspect for transit damage.
attached c of c to WIO

Rec'd 6/27/10 (20)

120

120

QC
Quality Control

QC8-Inspect parts - second check

0.00

Memo

0.00

8/7/14

20 PD 12-07-11

130

130

HandFinish
Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

20 MG 127-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86187

June-22-12 1:54:30 PM

86187

Page 3

Item ID: D3789-7

Accept

N9000040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Clamp

Start Date: 22/06/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 06/07/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC3- Inspect Part Finish

0.00

140

QC

Memo

0.00

Quality Control

20 ~~0~~ BK 12-7-11.

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Memo

0.00

Powder Coating

*****Mask bearing bore prior to powder coat*****

START TIME: 8:00

OVENTEMPERATURE: 3200F

FINISH TIME: 8:30

20X ~~0~~ M-F 12/07/12

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.00

Quality Control

20x ~~0~~ 12/07/12

W121841

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86187

86187

Page 4

June-22-12 1:54:30 PM

Item ID: D3789-7

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Clamp

Stop ***NS2***

Start Date: 22/06/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 06/07/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

Identify as per dwg & Stock Location: **ST 462** 0.00

190

Packaging

Memo

0.00

Packaging

20x

SD
12-7-13

200

QC21- Final Inspection - Work Order Release

0.00

200

QC

Memo

0.00

Quality Control

12/7/18

ME
12-07-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-22-12 1:54:34 PM

Work Order ID: 86187

86187

Parent Item: D3789-7

D3789-7

Parent Item Name: Clamp

Start Date: 22/06/2012

Required Date: 06/07/2012

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP Rev: A New Issue 08-12-10 DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2423		Manufactured	No			100	f	462.0150	0.07	1.473684			
D2423									**				
Lug Extrusion													

CL 12/06/24

Location	Loc Qty	Loc Code
MAT006	462.015	
43722	161.5	
68331	43.8506	
81557	256.6644	

1.48

D3789-7P

CL 12/7/10 (20)

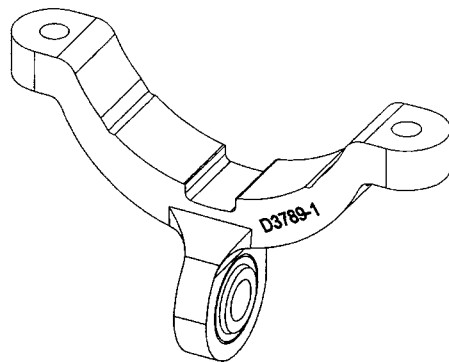
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

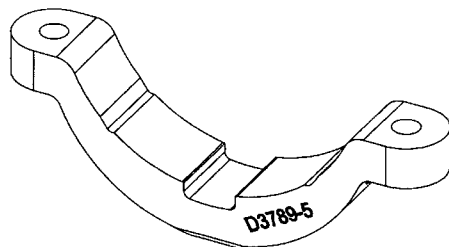
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

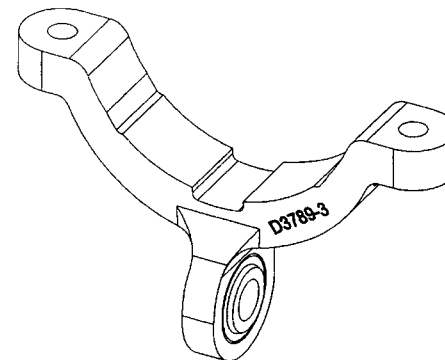
NOTE: Date & initial all entries



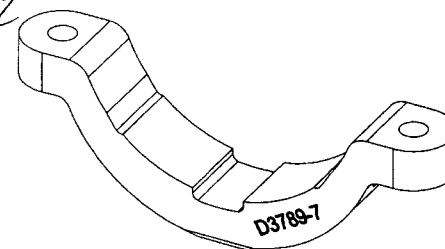
D3789-1 CLAMP



D3789-5 CLAMP



D3789-3 CLAMP



D3789-7 CLAMP

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 86187 MJS

12/06/22

DEO ATTACHED

RELEASED
08/12/22

NOTES:

- 1) MATERIAL: MANUFACTURE FROM D2423 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE WITH DART P/N AS SHOWN
- 7) WEIGHT: D3789-1, 0.16 lbs
D3789-3, 0.16 lbs
D3789-5, 0.14 lbs
D3789-7, 0.14 lbs
- 8) STAKE D2611 BEARING 4 PLACES EACH SIDE AFTER POWDER COAT
- 9) PART IS SYMETRICAL ABOUT ϕ

A		NEW ISSUE		HS	08 05 21
REV		DESCRIPTION		BY	DATE
DESIGN		HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN		HS			
CHECKED			DRAWING NO		REV. A
MFG APPR.			D3789		SHEET 1 OF 5
APPROVED			TITLE		SCALE
DE APPR.			CLAMP		NTS
DATE			08.05.21		

COPYRIGHT © 2008 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD

Dart Aerospace Ltd

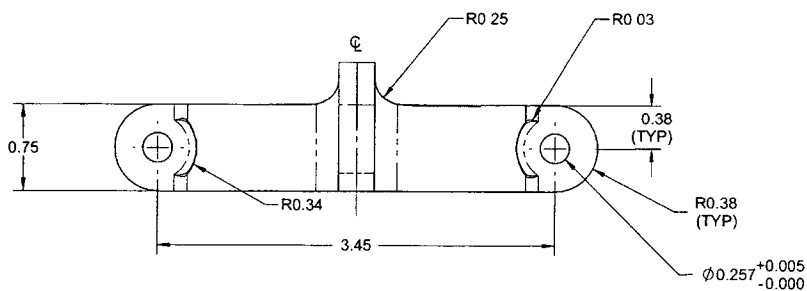
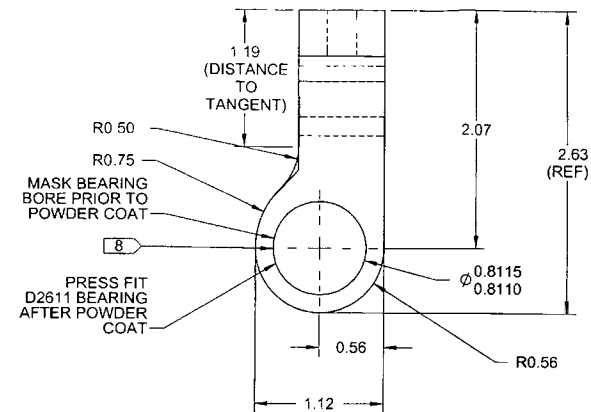
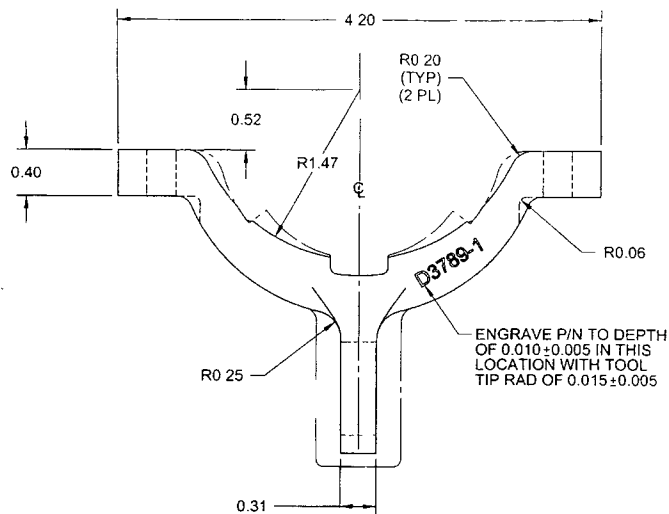
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3789-1 CLAMP

DEO ATTACHED

RELEASED

DESIGN	HS	DART AEROSPACE LTD	
DRAWN	HS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AM	DRAWING NO.	REV. A
MFG. APPR.	AM	D3789	SHEET 2 OF 5
APPROVED	AM	TITLE	SCALE
DE APPR.	AM	CLAMP	NTS
DATE	08.05.21	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

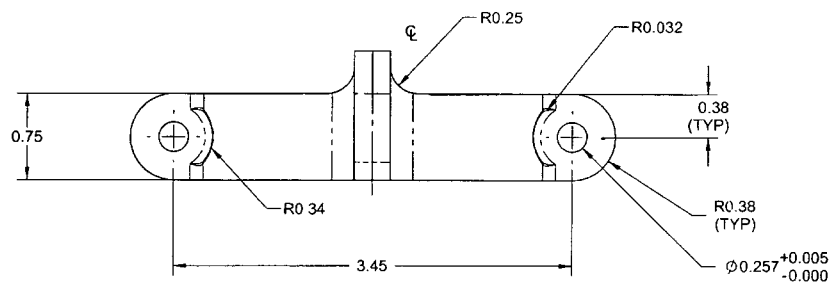
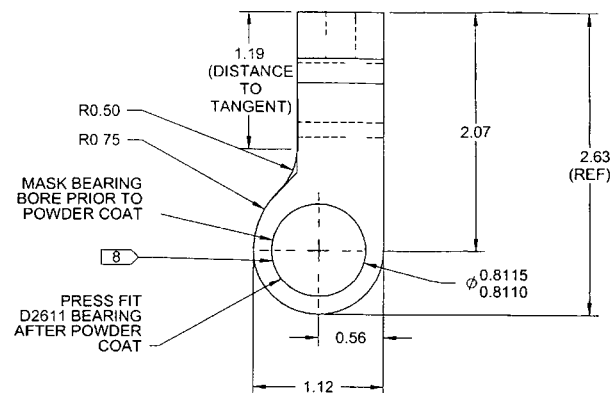
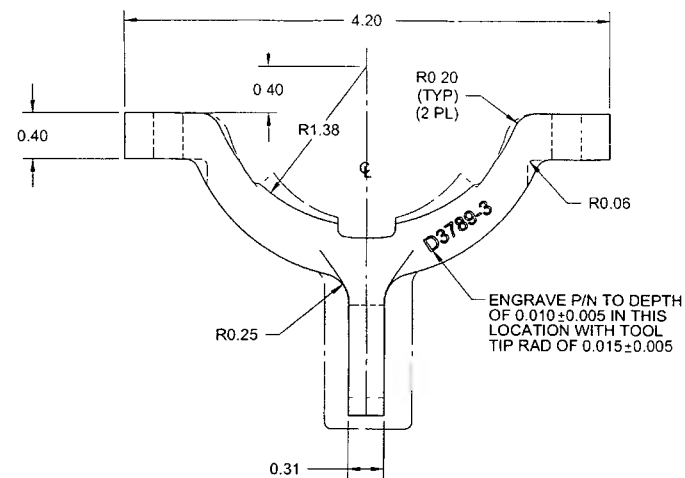
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



NOTE: Date & initial all entries



D3789-3 CLAMP

DEO ATTACHED

RELEASED
08/12/21

DESIGN	HS	DART AEROSPACE LTD	
DRAWN	HS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO	REV. A
MFG. APPR.		D3789	SHEET 3 of 5
APPROVED		TITLE	SCALE
DE APPR.		CLAMP	NTS
DATE	08.05.21	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD			

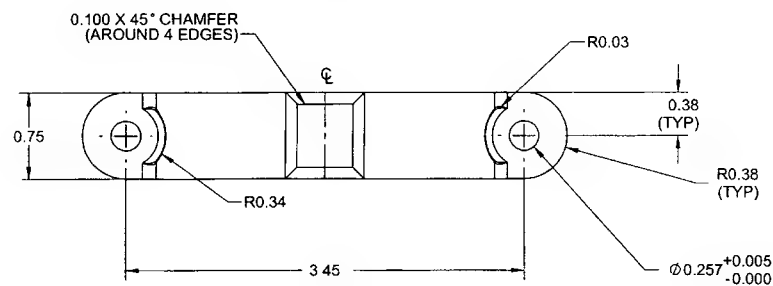
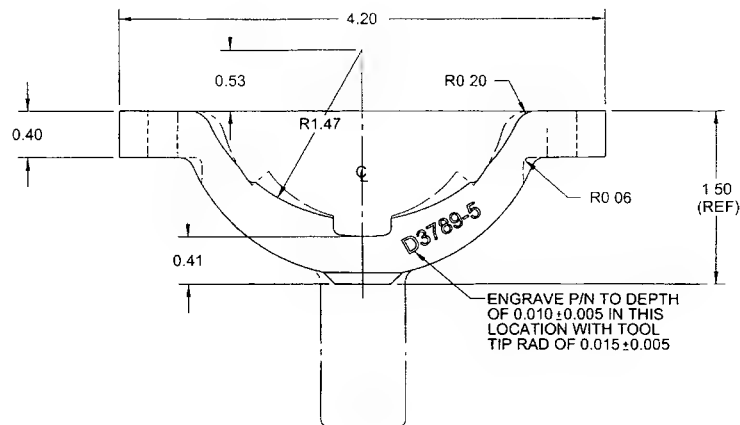
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3789-5 CLAMP

26127

DEO ATTACHED

RELEASED
08/12/21

DESIGN	HS	DART AEROSPACE LTD	
DRAWN	HS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	HS	DRAWING NO. D3789	REV. A
MFG. APPR.		TITLE	SHEET 4 OF 5
APPROVED		CLAMP	SCALE
DE APPR.			NTS
DATE	08.05.21	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

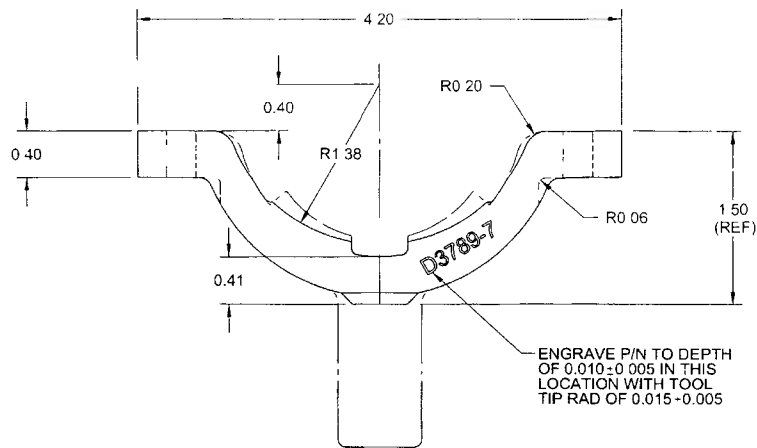
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

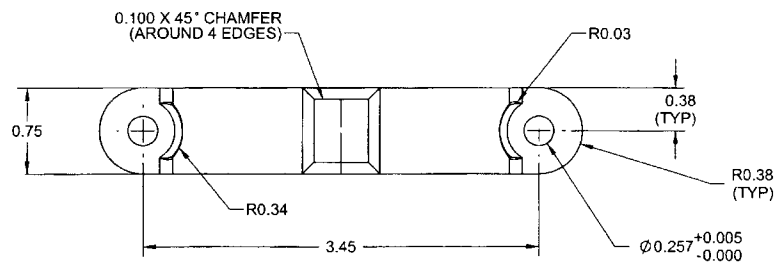
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



ENGRAVE P/N TO DEPTH
OF 0.010-0.005 IN THIS
LOCATION WITH TOOL
TIP RAD OF 0.015-0.005



D3789-7 CLAMP

DEO ATTACHED

RELEASED

DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	HS		
CHECKED	HS	DRAWING NO D3789	REV. A
MFG. APPR.			SHEET 5 OF 5
APPROVED		TITLE CLAMP	SCALE NTS
DE APPR.		COPYRIGHT © 2008 BY DART AEROSPACE LTD	
DATE	08.05.21	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

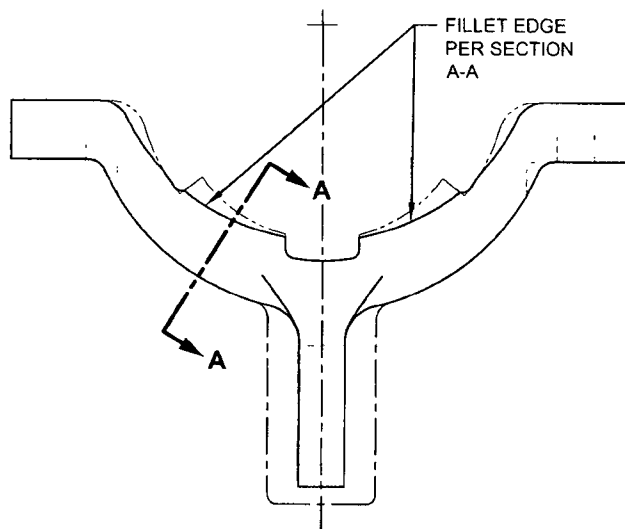
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

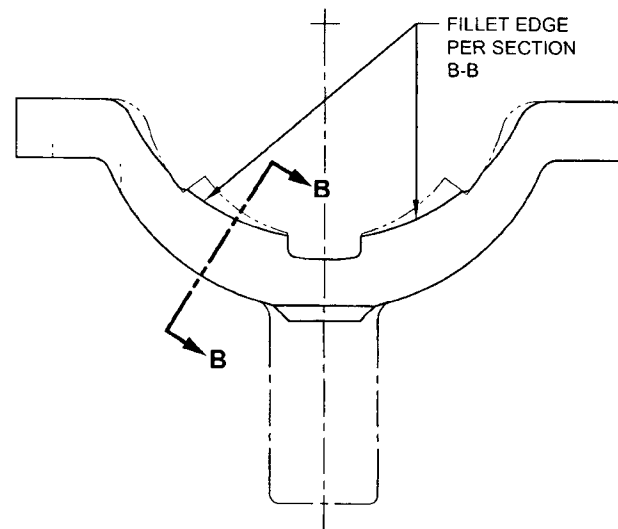
NOTE: Date & initial all entries

DRAWING NO. D3789	TITLE CLAMP	REV. A	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3789-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>AJS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.04.20	DATE 09.04.23	DATE 09.04.23	DATE 09/04/23	DATE 09/04/23		

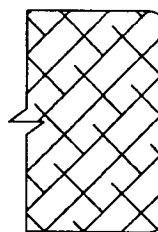
ADD FILLETS TO -1/-3/-5/-7 PER SECTIONS A-A AND B-B TO PREVENT CHAFING OF RUBBER CUSHIONS AS SHOWN:



D3789-1 CLAMP
D3789-3 CLAMP



D3789-5 CLAMP
D3789-7 CLAMP



R0.06 MIN - R0.10 MAX
2PL

SECTION A-A
SCALE 2X
SECTION B-B
SCALE 2X

SEE PAR 122 FOR FURTHER DETAILS

RELEASED
09/05/04 [Signature]

COPYRIGHT © 2009 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

20 Terry Fox Drive
Vankleek Hill, Ontario K0B 1R0 , Canada
Tel: (613) 678-3957
Fax: (613) 678-3956

Delivery Slip No.:

18572

Date:

Jun 29, 2012

Page:

1

Sold to:	Ship to:
Dart Aerospace Ltd. Att. Linda Lacelle 1270 Aberdeen Street Hawkesbury, Ontario K6A 1K7	Dart Aerospace Ltd. Att. Linda Lacelle 1270 Aberdeen Street Hawkesbury, Ontario K6A 1K7
Order No.: 17295	Sold By: Dewar, Eric
Shipped By: your truck	Ship Date: Jul 06, 2012

Description	Unit	Ordered quantity	Shipped quantity	Backorder quantity
D3789-3 Clamp as per dwg. D3789 Rev.A B86188	Each	20	20	
D3789-7 Clamp as per dwg. D 3789 Rev.A B86187	Each	20	20	
The delivered goods must be inspected upon receipt to confirm compliance. Should there be discrepancies please notify METEC within 30 days of delivery. The goods are otherwise deemed accepted.				
Received by _____		Thank you for your order!		



20 Terry Fox Drive, Vankleek Hill, Ontario K0B 1R0
Tel. (613) 673-3957 & (613) 678-2782 Fax (613) 678-3956 metec@metec.ca

CERTIFICATE OF CONFORMITY

SOLD TO:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ont.
K6A 1K7

SHIPPED TO:

same

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>PART NAME</u>	<u>P.O. NUMBER</u>
20	D3789-3	Clamp	17295
20	D3789-7	Clamp	17295

MATERIAL: supplied by DART B81557

We hereby certify that the above parts were made in conformance with applicable drawings.

METEC Metal Technology Inc.

Jan Norris

Vankleek Hill, July 9, 2012

